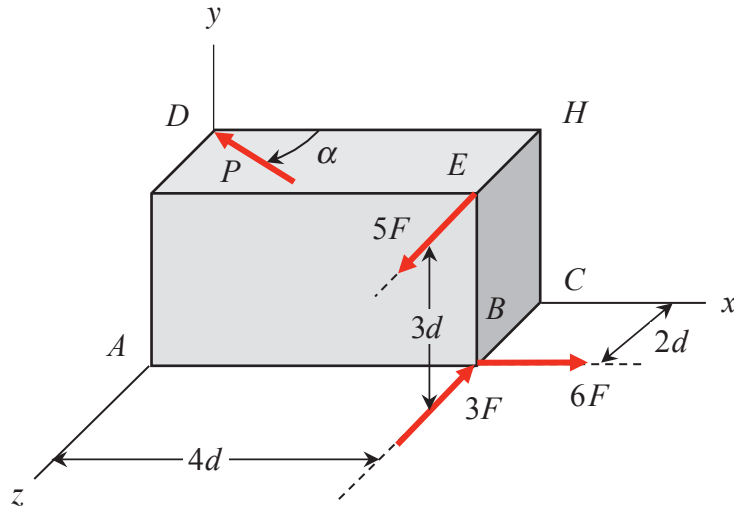


**Homework H7.A**

**Given:** A set of four forces act at corners of a parallelepiped block, as shown below.

**Find:**

- Determine the value of the load  $P$  and the angle  $\alpha$  such that this set of forces is equivalent to a single couple  $\vec{M}$ . Express your answer for  $P$  in terms of  $F$ .
- Determine the value of the equivalent couple  $\vec{M}$ . Express your answer in terms of  $F$  and  $d$ .



**Homework H7.B**

**Given:** A set of three forces act on the perimeter of a circular disk, as shown.

**Find:** Determine the equivalent force-couple system at the circle's center  $O$ . Express your answers in terms of  $F$  and  $R$ .

